

11/29/12

**ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY (FFO)  
Smart Grid Interoperability Standards Cooperative Agreement Program**

**EXECUTIVE SUMMARY**

- **Federal Agency Name:** National Institute of Standards and Technology (NIST), United States Department of Commerce (DoC)
- **Funding Opportunity Title:** Smart Grid Interoperability Standards Cooperative Agreement Program
- **Announcement Type:** Initial
- **Funding Opportunity Number:** 2013-NIST-SGIS-01
- **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.609, Measurement and Engineering Research and Standards
- **Dates:** All proposals must be received no later than 5:00 PM Eastern Time on Thursday, January 3, 2013. Proposals received after this deadline will not be reviewed or considered. An award may be made in the January to March 2013 time frame.
- **Proposal Submission Address:** See Section IV in the Full Announcement Text of this FFO.
- **Funding Opportunity Description:** NIST is soliciting proposals from eligible applicants for a program with substantial NIST participation that will support continuous innovation of the electrical grid through the coordination and acceleration of standards development and harmonization and advancement of the interoperability and security of smart grid devices and systems. The applicant will work with NIST in its fulfillment of standards coordination activities as mandated under the Energy Independence and Security Act of 2007 (EISA).
- **Total Amount to be Awarded:** Approximately \$750,000, subject to the availability of fiscal year 2013 (FY 13) funds, to fund a partial year of one new multi-year award for the remainder of FY 13, which award NIST can continue in two subsequent fiscal years at up to \$1,000,000 per year, subject to availability of funds, for a total of up to \$2,750,000.
- **Anticipated Amounts:** NIST anticipates funding one multi-year project with a budget and performance period through the end of fiscal year 2015 for up to \$2,750,000, subject to the availability of funds. Initial funding that may be obligated under this announcement is approximately \$750,000, subject to the availability of FY 13 funds, for the budget and performance period through the end of fiscal year 2013. The project may be continued on an annual basis for two additional years at a level of up to \$1,000,000 per year, subject to the multi-year funding policy described in Section II.2, Award Information, of this FFO.
- **Funding Instrument:** Cooperative agreement
- **Who is Eligible:** Institutions of higher education, non-profit organizations, state and local governments, and commercial organizations in the United States and its territories. An eligible organization may work individually or include proposed subawards or contracts with others in a project proposal, effectively forming a team or consortium.
- **Cost Sharing Requirements:** This program does not require cost sharing.

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### **FULL ANNOUNCEMENT TEXT**

#### **I. Funding Opportunity Description**

The statutory authority for the Smart Grid Interoperability Standards Cooperative Agreement Program is the Energy Independence and Security Act of 2007(Pub. L. 110-140) (EISA) Section 1305 and 15 U.S.C. § 272(b) and (c).

**Program Description:** The U. S. Department of Commerce, National Institute of Standards and Technology (NIST) invites proposals for a project with substantial NIST participation that will support continuous innovation of the electrical grid through coordinating and accelerating standards development and harmonization and advancement of the interoperability and security of smart grid devices and systems. The successful applicant will work with NIST in its fulfillment of its responsibilities pursuant to EISA.

EISA sets forth the United States' goal of modernizing the nation's electricity transmission and distribution system to create a smart electric grid. Under Section 1305 of EISA, NIST has "primary responsibility to coordinate the development of a framework that includes protocols and model standards for information management to achieve interoperability of smart grid devices and systems."

In June 2011, the White House released a report by the Cabinet-level National Science and Technology Council (NSTC) entitled "A Policy Framework for the 21st Century Grid: Enabling Our Secure Energy Future" (<http://www.whitehouse.gov/sites/default/files/microsites/ostp/nstc-smart-grid-june2011.pdf>). The critical role of standards for the smart grid is spelled out in EISA and in the June 2011 NSTC report, which encourages the development and adoption of standards to ensure that today's investments in the smart grid remain valuable in the future to catalyze innovations, support consumer choice, create economies of scale to reduce costs, highlight best practices, and open global markets for smart grid devices and systems.

A key NIST objective is to ensure the existence of a self-sustaining, ongoing process that coordinates development and acceleration of interoperability and security standards necessary to support grid modernization in the decades to come. As described in EISA, smart grid modernization should provide additional functionality of the grid and encourage backward compatibility to the extent practical. NIST envisions a program that would provide a key mechanism to obtain cooperation and input from smart grid stakeholders to evolve the smart grid standards framework as new requirements and technologies emerge.

The project process, in which NIST will have substantial participation, coordinates all stakeholders of the smart grid to accelerate standards development and harmonization and advance the interoperability and security of smart grid devices and systems. This activity involves developing use cases, identifying gaps and overlaps in smart grid standards, developing requirements that address these gaps, and developing plans to achieve coordination with standards development organizations (SDOs) and standards setting organizations (SSOs) to incorporate these requirements into existing or new standards and guidelines in a timely way. The process involves interaction with the smart grid community using principles of transparency, accountability, inclusiveness and consensus.

Specifically, the awardee will work cooperatively with NIST to:

- 1) provide the technical guidance and coordination necessary to facilitate the development of secure and reliable standards for smart grid interoperability, including development of smart grid architectural principles and conceptual frameworks,
- 2) identify and specify the necessary testing and certification requirements, including providing the underlying rationale and implementation guidance where appropriate, to assess the achievement of interoperability using smart grid standards,
- 3) oversee the performance of these activities to achieve significant output and outcomes useful to the smart grid community, in order to maintain momentum and achievement,
- 4) proactively inform and educate smart grid industry stakeholders on the definition of and the benefits attributable to interoperability, and
- 5) conduct outreach to similar organizations in other countries to help establish global interoperability alignment.

Additionally, the awardee, through its work with the standards process, should interface with and support the broad NIST smart grid standardization and research program. That program, the objectives of which are to develop and deploy advances in measurement science to enable integration of interoperable and secure real-time sensing, control, communications, information and power technologies, in order to increase efficiency, reliability and sustainability of the nation's electric grid, has the following priority areas:

- a. Smart Grid Testing and Certification
- b. Cybersecurity for Smart Grid Systems
- c. Smart Grid Communication Networks
- d. Precision Timing for Grid Systems
- e. Electromagnetic Compatibility of Smart Grid Devices and Systems
- f. Smart Grid System Testbed Facility
- g. Wide-area Monitoring and Control of Smart Grid
- h. Advanced Metering in Smart Distribution Grids
- i. Power Conditioning Systems for Renewables, Storage, and Microgrids
- j. Measurement Science for User-to-Grid Interoperation
- k. Building Integration with Smart Grid
- l. Industrial Integration with Smart Grid
- m. Smart Grid National Coordination

More information about NIST's Smart Grid program is available at <http://www.nist.gov/smartgrid/>.

## **II. Award Information**

1. **Funding Instrument.** The funding instrument used in this program will be a cooperative agreement. The nature of NIST's "substantial involvement" will generally be collaboration with the applicant by working jointly with the applicant in carrying out the scope of work; or specifying direction or redirection of the scope of work due to inter-relationships with other projects requiring such cooperation; limiting applicant discretion with respect to scope of work, organizational structure,

staffing, mode of operations and other management processes, coupled with close monitoring or operational involvement during performance; substantial, direct NIST operational involvement during the project to ensure compliance with such statutory requirements; approving subawards; participating in selection of key personnel; or requiring that the applicant meet or adhere to specific procedural requirements before subsequent stages of the project may continue. Additional forms of substantial involvement that may arise are described in the DoC Grants and Cooperative Agreements Interim Manual, which is available at

[http://www.osec.doc.gov/oam/grants\\_management/policy/doc\\_grants\\_manual/default.htm](http://www.osec.doc.gov/oam/grants_management/policy/doc_grants_manual/default.htm).

2. **Multi-Year Funding Policy.** When a proposal for a multi-year award is approved, funding will usually be provided for only the first year of the program. If a project is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the sole discretion of NIST. Continued funding will be contingent upon satisfactory performance, continued relevance to the mission and priorities of the Smart Grid Interoperability Standards Cooperative Agreement Program, and the availability of funds.
3. **Funding Availability.** NIST anticipates funding one multi-year project with a budget and performance period through the end of fiscal year 2015 for up to \$2,750,000, subject to the availability of funds. Initial funding that may be obligated under this announcement is approximately \$750,000, subject to the availability of FY 13 funds, for the budget and performance period through the end of fiscal year 2013. The project may be continued on an annual basis for two additional years at a level of up to \$1,000,000 per year, subject to the multi-year funding policy described in Section II.2, Award Information, of this FFO.

### III. **Eligibility Information**

1. **Eligible Applicants.** This program is open to institutions of higher education, non-profit organizations, state and local governments, and commercial organizations in the United States and its territories. An eligible organization may work individually or include proposed subawards or contracts with others in a project proposal, effectively forming a team or consortium.
2. **Cost Sharing or Matching.** Cost sharing or matching is not required.
3. **Other**

**Pre-Proposals.** NIST is not accepting pre-proposals or white papers for this program.

### IV. **Application/Proposal and Submission Information**

1. **Address to Request Application Package.** The standard application package, consisting of the standard forms, i.e., SF-424, SF-424A, SF-424B, SF-LLL, and the CD-511, is available at [www.grants.gov](http://www.grants.gov). For applicants without Internet access, the standard application package may be requested by contacting the research grant program office personnel listed below.

Karen Perry, Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8602, Gaithersburg, MD 20899-8602 (Phone: (301) 975-5910).

#### 2. **Content and Format of Application/Proposal Submission**

##### a. **Required Forms and Documents**

- (1) SF-424, Application for Federal Assistance. The SF-424 must be signed by an authorized representative of the applicant organization. The FFO number 2013-NIST-SGIS-01 must be identified in item 12 of the SF-424. The list of certifications and assurances referenced in item 21 of the SF-424 is contained in the SF-424B.

- (2) SF-424A, Budget Information – Non-Construction Programs. (The budget should reflect anticipated expenses for each year of the project, considering all potential cost increases, including cost of living adjustments.)
- (3) SF-424B, Assurances – Non-Construction Programs
- (4) CD-511, Certification Regarding Lobbying
- (5) SF-LLL, Disclosure of Lobbying Activities (if applicable)
- (6) **Technical Proposal.** The Technical Proposal is a word-processed document of no more than thirty (30) pages responsive to the program description (see Section I of this FFO) and the evaluation criteria (see Section V.1. of this FFO). It should contain the following information:
  - a) **Executive Summary.** An executive summary of the proposed approach, this should be consistent with the evaluation criteria (see Section V.1. of this FFO). The executive summary should not exceed one (1) single-sided page.
  - b) **Technical Project Approach.** A description of the proposed approach, sufficient to permit evaluation of the proposal, in accordance with the Technical Evaluation Plan evaluation criterion (see Section V.1.(1) of this FFO).
  - c) **Stakeholder Engagement Work Plan.** A description of the proposed stakeholder engagement, sufficient to permit evaluation in accordance with the Stakeholder Engagement criterion (see Section V.1.(2) of this FFO).
  - d) **Methodology and Project Management Plan.** A description of the applicant's proposed methods and approach to project management sufficient to permit evaluation in accordance with the Methodology and Project Management Plan evaluation criterion (see Section V.1.(3) of this FFO).
  - e) **Qualifications of the Applicant.** A description of the qualifications and proposed operational or management activities of key personnel who will be assigned to work on the proposed project are required. Examples of key personnel past experiences should include experiences working with a wide variety of organizations, including accredited institutions of higher education; non-profit organizations; consortia; commercial organizations; standards development organizations and standards development processes; and Federal, state, local, Indian tribal, and territorial government representatives. This section should be the primary, but not only, means by which the proposal will be evaluated according to the Qualifications of the Applicant evaluation criterion (see Section V.1. of this FFO).
  - f) **Resource Availability and Future Planning.** A description of the facilities and overall support available to accomplish the project objectives.
- (7) **Budget Narrative.** There is no set format for the Budget Narrative; however, it should provide a detailed breakdown and explanation of each of the object class categories as reflected on the SF-424A. For awards to commercial organizations, audits must be conducted by an external auditor (CPA, or cognizant Federal audit agency) after the first year and at the end of a two (2)-year project. If a applicant has never received Federal funding from any Federal agency, a certification will be required from a CPA to determine whether the applicant has a functioning financial management system that meets the provisions of 15 C.F.R. § 14.21. Therefore, costs for these audits and certification should be included in the budget accordingly.
- (8) **Indirect Cost Rate Agreement.** If indirect costs are included in the proposed budget, provide a copy of the approved negotiated agreement if this rate was negotiated with a cognizant Federal audit agency. If the rate was not established by a cognizant Federal

audit agency, provide a statement to this effect. If the successful applicant includes indirect costs in the budget and has not established an indirect cost rate with a cognizant Federal audit agency, the applicant will be required to obtain such a rate.

- (9) **Resumes of key personnel** (these do not contribute to the total number of pages)
- (10) **Letters of commitment**, if applicable (these do not contribute to the total number of pages).
  - a) If key personnel are identified by the applicant and are willing to fill vacancies on the applicant's staff, letters of commitment from the identified persons should be included. The letters from such individuals, or groups of individuals, should indicate the relationship of the writer to the applicant and how the writer will help fulfill the efforts described in the Funding Opportunity Description (see Section I of this FFO).
  - b) If the applicant's proposal includes subawards or contracts to third parties, effectively forming a team or consortium, as described in Section III.1, letters of commitment from proposed subawardees and contractors should be included. Each letter should indicate the submitting organization's willingness to participate as a contractor or subawardee and describe what work they will do and the associated cost to the applicant (see Section I of this FFO).
  - c) Letters of commitment should not be letters submitted by non-proposing entities wishing to vouch for the applicant's (or entities associated with the applicant) knowledge, skills, and abilities or entities to conduct the proposed work. These should be in the form of a letter of support (see Section IV.2.a.11 of this FFO).
- (11) **Letters of support**, if applicable, optional (one recommended but no more than five) (these do not contribute to the total number of pages). Letters of support from non-proposing parties are acceptable. Letters of support may be from parties with whom the applicant has worked with in the past in a similar area of work to that described in the Funding Opportunity Description (Section I).

If submitting the proposal electronically via Grants.gov, items IV.2.a.(1) through IV.2.a.(5) above are part of the standard application package in Grants.gov and can be completed through the download application process. Items IV.2.a.(6) through IV.2.a.(11) must be completed and attached by clicking on "Add Attachments" found in item 15 of the SF-424, Application for Federal Assistance. This will create a zip file that allows for transmittal of the documents electronically via Grants.gov. Applicants should carefully follow specific Grants.gov instructions at [www.grants.gov](http://www.grants.gov) to ensure the attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicating a proposal is received does not provide information about whether attachments have been received.

If submitting a proposal by paper, all of the required proposal documents should be submitted in the order listed above.

#### **b. Proposal Format**

- (1) **Cover Page.**
- (2) **Double-sided copy.** For paper submissions, print on both sides of the paper (front to back counts as two (2) pages).
- (3) **E-mail and facsimile (fax) submissions.** Will not be accepted.
- (4) **Number of paper copies.** For paper submissions, one (1) signed stapled original and two (2) stapled copies. If original proposal is in color, the two (2) copies must also be in color. If submitting electronically via Grants.gov, paper copies are not required.

- (5) **Figures, graphs, images, and pictures.** Should be of a size that is easily readable or viewable and may be landscape orientation.
  - (6) **Font.** Easy to read font (10-point minimum). Smaller type may be used in figures and tables but must be clearly legible.
  - (7) **Page layout.** The Technical Proposal (Section IV.2.a.(6)) must be in portrait orientation except for figures, graphs, images, and pictures. Paragraphs are to be clearly separated from each other by double spacing paragraph formatting or equivalent.
  - (8) **Page Limit.** Proposals are limited to thirty (30) pages.
    - a) Page limit includes: Table of contents (if included), Technical Proposal with all required sections, including management information and qualifications, figures, graphs, tables, images, and pictures.
    - b) Page limit excludes: SF-424, Application for Federal Assistance; SF-424A, Budget Information – Non-Construction Programs; SF-424B, Assurances – Non-Construction Programs; SF-LLL, Disclosure of Lobbying Activities; CD-511, Certification Regarding Lobbying; Budget Narrative; and Indirect Cost Rate Agreement, resumes, letters of commitment, letters of support.
  - (9) **Page numbering.** Number pages sequentially.
  - (10) **Paper size.** 21.6 by 27.9 centimeters (8 ½ by 11 inches).
  - (11) **Proposal language.** English.
  - (12) **Staple paper submission.** For paper submissions, staple the original signed proposal and each of the two (2) copies securely with one (1) staple in the upper left-hand corner.
  - (13) **Typed document.** All proposals, including forms, must be typed; handwritten proposals and forms will not be accepted.
3. **Submission Dates and Times.** All proposals must be received no later than 5:00 PM Eastern Time on Thursday, January 3, 2013. Proposals received after this deadline will not be reviewed or considered. An award may be made in the January to March 2013 time frame.
4. **Funding Restrictions.** Profit or fee is not an allowable cost.
5. **Other Submission Requirements**
- a. **Proposals may be submitted by paper or electronically.**
- (1) Paper proposals must be submitted in triplicate (an original and two copies) and submitted to the appropriate personnel (see Section IV.1. of this FFO).
  - (2) Electronic proposals must be submitted via Grants.gov at [www.grants.gov](http://www.grants.gov), under announcement 2013-NIST-SGIS-01.
    - a) Submitters of electronic proposals should carefully follow specific Grants.gov instructions to ensure the attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicating a proposal is received does not provide information about whether attachments have been received. For further information or questions regarding applying electronically for the 2013-NIST-

SGIS-01 announcement, contact Christopher Hunton by phone at 301-975-5718 or by e-mail at [christopher.hunton@nist.gov](mailto:christopher.hunton@nist.gov).

- b) Applicants are strongly encouraged to start early and not wait until the approaching due date before logging on and reviewing the instructions for submitting a proposal through Grants.gov. The Grants.gov registration process must be completed before a new registrant can apply electronically. If all goes well, the registration process takes three (3) to five (5) business days. If problems are encountered, the registration process can take up to two (2) weeks or more. Applicants must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number (See Section VI.2.b) and must be registered with the Federal Central Contractor Registry and with a Credential Provider, as explained on the Grants.gov Web site. After registering, it may take several days or longer from the initial log-on before a new Grants.gov system user can submit a proposal. Only authorized individual(s) will be able to submit the proposal, and the system may need time to process a submitted proposal. Applicants should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the applicant is advised to (a) print any error message received and (b) call Grants.gov directly for immediate assistance. If calling from within the United States or from a U. S. territory, please call 800-518-4726. If calling from a place other than the United States or a U. S. territory, please call 606-545-5035. Assistance from the Grants.gov Help Desk will be available around the clock every day, with the exception of Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Time the day after Federal holidays. For assistance using Grants.gov, you may also contact [support@grants.gov](mailto:support@grants.gov).
- c) Information essential to successful submission of proposals on the Grants.gov system is detailed in the For Applicants section found in red on the left side of the [www.grants.gov](http://www.grants.gov) home page, and all potential applicants should pay close attention to the information contained therein. The All About Grants, Applicant FAQs, and Submit Application FAQs sections found under the Applicant Resources option are particularly important.

**Important:** *All applicants, both electronic and paper submitters, should be aware that adequate time must be factored into applicants' schedules for delivery of their proposal. Submitters of electronic proposals are advised that volume on Grants.gov may be extremely heavy on the deadline date, and if Grants.gov is unable to accept proposals electronically in a timely fashion, applicants are encouraged to exercise their option to submit proposals in paper format. Submitters of paper proposals should allow adequate time to ensure a paper proposal will be received on time, taking into account that Federal Government security screening for U.S. Postal Service mail may delay receipt of mail for up to two (2) weeks and that guaranteed express mailings and/or couriers are not always able to fulfill their guarantees.*

Refer to important information in Section IV.3. Submission Dates and Times, to help ensure your proposal is received on time.

- b. Amendments.** Any amendments to this FFO will be announced through Grants.gov. Applicants can sign up for Grants.gov FFO amendments, while applicants without access to the Internet can contact the appropriate contact (see Section VII. of this FFO) to request copies.

## **V. Application/Proposal Review Information**

### **1. Evaluation Criteria**

The evaluation criteria that will be used in evaluating these proposals and assigned weights are as



follows:

**(1) Technical Action Plan (0 – 40 points, sub-criteria a. through e. below receive equal weight):**

The extent to which the applicant's proposal clearly addresses the program goals articulated in the solicitation and demonstrates how the applicant will efficiently and effectively:

- a. provide the technical guidance and coordination necessary to facilitate the development of secure and reliable standards for smart grid interoperability, including development of smart grid architectural principles and conceptual frameworks,
- b. identify and specify the necessary testing and certification requirements, including providing the underlying rationale and implementation guidance where appropriate, to assess the achievement of interoperability using smart grid standard,
- c. oversee the performance of these activities to achieve significant output and outcomes useful to the smart grid community, in order to maintain momentum and achievement,
- d. proactively inform and educate smart grid industry stakeholders on the definition of and the benefits attributable to interoperability, and
- e. conduct outreach to similar organizations in other countries to help establish global interoperability alignment.

**(2) Stakeholder Engagement:** The extent to which the applicant's proposal demonstrates the applicant's familiarity with the Smart Grid stakeholder community and how it will utilize that familiarity to flexibly and effectively identify, mitigate, and manage issues associated with implementing the program. This criterion includes approaches to ensure representation from key communities, facilitate multiple diverse stakeholders with different points of view and achieve consensus, ensure openness and transparency and responsiveness to change, and a communications and outreach strategy. (0 to 20 points)

**(3) Methodology and Project Management Plan:** The extent to which the applicant's proposed methods and approach to managing the project and identifying and resolving problems will ensure the quality of its performance. The reviewers will consider the detailed work plan; clear and measurable performance objectives; key interim and final outputs reflecting the performance objectives; milestones, key deliverables, and timelines provided; and the likelihood that the approach would be successful in achieving the objectives and addressing challenges that may arise in the course of the project. (0 to 20 points)

**(4) Staffing and Resource Plan:** The qualifications and experience of the proposed staff to carry out the objectives of the proposal; extent to which the applicant has access to the necessary facilities, technical experts and overall support to accomplish the project objectives; level of proposed staff effort during the award and the willingness of proposed staff to commit to the project for the duration of the initial award period (if key personnel have been identified to fill vacancies, letters of commitment from such persons should be included, see Section IV.2.a.(10) in this FFO); and the timeline needed for the applicant to get started on the work to meet the efforts in the Funding Opportunity Description. Professional experience may include demonstrated knowledge of the current state of Smart Grid interoperability standards, the national electricity transmission and distribution system and industry, and current modernization issues; and the critical role of standards for the Smart Grid as spelled out in EISA and in the June 2011 NSTC report (see Section I in this FFO for the link to this report). Professional experience may also include bringing together diverse stakeholders and qualifications in stakeholder outreach and coordination and experience with facilitation of many dynamic stakeholders over a multitude of critical issues, and in substantive differences of approach and perspective. (0 to 20 points)

## **2. Review and Selection Process**

**a. Initial Screening of all Program Proposals.** All proposals received in response to this FFO will be

assigned to the NIST Smart Grid and Cyber-Physical Systems Program Office and reviewed as received to determine whether they are eligible, complete, and responsive to this FFO, (see Section I in this FFO). Proposals determined to be ineligible, incomplete, or non-responsive based on this FFO may be eliminated from further review.

- b. **Review of Eligible, Complete, and Responsive Proposals.** At least three (3) independent, objective individuals knowledgeable about the smart grid activities described in the proposal will conduct a technical review of each proposal, based on the evaluation criteria (see Section V.1. of this FFO). If non-federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Based on the reviewers' scores, a rank order will be prepared.

The Selecting Official, who is the Director of the Smart Grid and Cyber Physical Systems Program Office, or designee, will make the final proposal selection. The Selecting Official shall select a proposal for award based upon the rank order of the proposals, and may select a proposal out of rank based on one or more of the following selection factors: the results of the reviewers' evaluations; priorities and objectives as set forth in the Funding Opportunity Description (Section I) set forth in this FFO, whether the project duplicates other projects funded or considered for funding by NIST or other federal agencies; the availability of funds, and whether the applicant's past actions in technical areas likely to arise in the standards development process may raise concerns about the perceived neutrality of the applicant toward the outcome of the standards development and harmonization process.

In accordance with the Federal appropriations law expected to be in effect at the time of project funding, NIST anticipates that the selected applicant will be provided a form and asked to make a representation regarding any unpaid delinquent tax liability or felony conviction under any Federal law.

NIST reserves the right to negotiate the budget costs with the selected applicant. Negotiations may include requesting that the applicant remove certain costs. Additionally, NIST may request that the applicant modify objectives or work plans and provide supplemental information required by the agency prior to award. NIST also reserves the right to reject a proposal where information is uncovered that raises a reasonable doubt as to the responsibility of the applicant. NIST may select part, some, all, or none of the proposals. The final approval of selected proposals and issuance of awards will be by the NIST Grants Officer. The award decisions of the Grants Officer are final.

- 3. **Anticipated Announcement and Award Dates.** An award may be made in the January to March 2013 time frame.

#### 4. **Additional Information**

- a. **Proposal Replacement Pages.** Applicants may not submit replacement pages and/or missing documents once a proposal has been submitted. Any revisions must be made by submission of a new proposal that must be received by NIST by the submission deadline.
- b. **Notification to Unsuccessful Applicants.** Unsuccessful applicants will be notified in writing.
- c. **Retention of Unsuccessful Proposals.** One (1) copy of each non-selected proposal will be retained for three (3) years for record keeping purposes and the other two (2) copies will be destroyed. After three (3) years, the remaining copy will be destroyed.

#### VI. **Award Administration Information**

- 1. **Award Notices.** Successful applicants will receive an award from the NIST Grants Officer. The award cover page, i.e., CD-450, Financial Assistance Award is available at [http://ocio.os.doc.gov/s/groups/public/@doc/@os/@ocio/@oitpp/documents/content/dev01\\_002513.p](http://ocio.os.doc.gov/s/groups/public/@doc/@os/@ocio/@oitpp/documents/content/dev01_002513.p)

df and the DoC Financial Assistance Standard Terms and Conditions (March 2008), which may be updated by the time of award, are available at <http://www.osec.doc.gov/oam/archive/docs/GRANTS/DOC%20STCsMAR08Rev.pdf>.

## 2. Administrative and National Policy Requirements

- a. **DoC Pre-Award Notification Requirements.** The DoC Pre-Award Notification Requirements for Grants and Cooperative Agreements, which are contained in the *Federal Register* notice of February 11, 2008 (73 FR 7696), are applicable to this FFO and are available at <https://www.federalregister.gov/articles/2008/02/11/E8-2482/departments-of-commerce-pre-award-notification-requirements-for-grants-and-cooperative-agreements>. These requirements may be updated after publication of this FFO.
- b. **Employer/Taxpayer Identification Number (EIN/TIN), Dun and Bradstreet Data Universal Numbering System (DUNS), and System for Award Management (SAM)** All applicants for Federal financial assistance are required to obtain a universal identifier in the form of DUNS number and maintain a current registration in the Federal government's primary registrant database, SAM. On the form SF-424 items 8.b. and 8.c., the applicant's 9-digit EIN/TIN and 9-digit DUNS number must be consistent with the information in SAM (<https://www.sam.gov/>) and Automated Standard Application for Payment System (ASAP). For complex organizations with multiple EIN/TIN and DUNS numbers, the EIN/TIN and DUNS numbers MUST be the numbers for the applying organization. Organizations that provide incorrect/inconsistent EIN/TIN and DUNS numbers may experience significant delays in receiving funds if their proposal is selected for funding. Confirm that the EIN/TIN and DUNS number are consistent with the information on the SAM and ASAP.

Per 2 C.F.R. Part 25, each applicant must:

- (1) Be registered in the CCR before submitting a proposal noting the CCR now resides in SAM;
- (2) Maintain an active CCR registration, noting the CCR now resides in SAM, with current information at all times during which it has an active Federal award or a proposal under consideration by an agency; and
- (3) Provide its DUNS number in each application or proposal it submits to the agency.

The applicant can obtain a DUNS number from Dun and Bradstreet. A DUNS number can be created within one business day. The CCR or SAM registration process may take five or more business days to complete. If you are currently registered with the CCR, you may not need to make any changes. However, please make certain that the TIN associated with your DUNS number is correct. Also note that you will need to update your CCR registration annually. This may take three or more business days to complete. Information about SAM is available at [SAM.gov](http://SAM.gov). See also 2 C.F.R. Part 25 and the *Federal Register* notice published on September 14, 2010, at 75 FR 55671.

- c. **Collaborations with NIST Employees.** All proposals should include a description of any work proposed to be performed by an entity other than the applicant, and the cost of such work should ordinarily be included in the budget.

If an applicant proposes collaboration with NIST, the statement of work should include a statement of this intention, a description of the collaboration, and prominently identify the NIST employee(s) involved, if known. Any collaboration by a NIST employee must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the approval of the proposed collaboration. Any unapproved collaboration will be stricken from the proposal prior to the merit review.

- d. **Use of NIST Intellectual Property.** If the applicant anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the

intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described in 35 U.S.C. §§ 200-212, 37 C.F.R. Part 401, 15 C.F.R. § 14.36, and in Section B.21 of the DoC Pre-Award Notification Requirements, 73 FR 7696 (February 11, 2008). Questions about these requirements may be directed to the Chief Counsel for NIST, (301) 975-2803.

Any use of NIST-owned intellectual property by a applicant is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this FFO, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

- e. **Research Projects Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects Including Software Testing.** Any proposal that includes research involving human subjects, human tissue/cells, data or recordings involving human subjects, including software testing, must meet the requirements of the Common Rule for the Protection of Human Subjects ("Common Rule"), codified for the Department of Commerce (DoC) at 15 C.F.R. Part 27. In addition, any such application that includes research on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other Federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Executive Orders and Presidential statements of policy on these topics.

NIST reserves the right to make an independent determination of whether an applicant's research involves human subjects. If NIST determines that your research project involves human subjects, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving human subjects shall be initiated or costs incurred under the award until the NIST Grants Officer issues written approval. Retroactive approvals are not permitted.

NIST will accept applications that include exempt and non-exempt human subjects research activities. Non-exempt human subjects research activities will be required to have protocols approved by an Institutional Review Board (IRB) currently registered with the Office for Human Research Protections (OHRP) within the DHHS and that will be performed by entities possessing a currently valid Federal-wide Assurance (FWA) on file from OHRP that is appropriately linked to the cognizant IRB for the protocol. Information regarding how to apply for an FWA and register and IRB with OHRP can be found at <http://www.hhs.gov/ohrp/assurances/index.html>. ***The applicant should clearly indicate in the proposal, by separable task, all research activities believed to be exempt or non-exempt research involving human subjects and the expected institution(s) where the research activities involving human subjects may be conducted.***

Generally, NIST does not fund research involving human subjects in foreign countries. NIST will consider, however, the use of **preexisting** tissue, cells, or data from a foreign source on a limited basis if all of the following criteria are satisfied:

- (1) the scientific source is considered unique,
- (2) an equivalent source is unavailable within the United States,
- (3) an alternative approach is not scientifically of equivalent merit, and
- (4) the specific use qualifies for an exemption under the Common Rule.

Any award issued by NIST for the program announced in this FFO is required to adhere to all Presidential policies, statutes, guidelines, and regulations regarding the use of human embryonic

stem cells. The DoC/NIST follows the NIH Guidelines by supporting and conducting research using only human embryonic stem cell lines that have been approved by NIH in accordance with the NIH Guidelines. Detailed information regarding NIH Guidelines for stem cells is located on the NIH Stem Cell Information website: <http://stemcells.nih.gov>. The DoC/NIST will not support or conduct any type of research that the NIH Guidelines prohibit NIH from funding. The DoC/NIST will review research using human embryonic stem cell lines that it supports and conducts in accordance with the Common Rule and NIST implementing procedures, as appropriate.

Any request to support or conduct research using human embryonic stem cell lines not currently approved by the NIH, will require that the owner, deriver or licensee of the human embryonic stem cell line apply for and receive approval of the registration of the cell line through the established NIH application procedures: [http://hescregapp.od.nih.gov/NIH\\_Form\\_2890\\_Login.htm](http://hescregapp.od.nih.gov/NIH_Form_2890_Login.htm). Due to the timing uncertainty associated with establishing an embryonic stem cell line in the NIH registry, the use of existing human embryonic stem cell lines in the NIH Embryonic Stem Cell Registry may be preferred by applicants or current award recipients. The NIH Embryonic Stem Cell Registry is located at: [http://grants.nih.gov/stem\\_cells/registry/current.htm](http://grants.nih.gov/stem_cells/registry/current.htm).

An applicant or current award recipient proposing to use a registered embryonic stem cell line will be required to document an executed agreement for access to the cell line with the provider of the cell line, and acceptance of any established restrictions for use of the cell line, as may be noted in the NIH Embryonic Stem Cell Registry.

If the applicant's proposal appears to include research activities involving human subjects the following information may be requested during the proposal review process:

- (1) The name(s) of the institution(s) where the research will be conducted;
- (2) The name(s) and institution(s) of the cognizant IRB(s), and the IRB registration number(s);
- (3) The FWA number of the applicant linked to the cognizant IRB(s);
- (4) The FWAs associated with all organizations engaged in the planned research activity linked to the cognizant IRB;
- (5) If the IRB review(s) is pending, the estimated start date for research involving human subjects;
- (6) The IRB approval date (if currently approved for exempt or non-exempt research);
- (7) If any FWAs or IRB registrations are being applied for, that should be clearly stated.

Additional documentation may be requested, as warranted, during review of the applicant's proposal, but may include the following for research activities involving human subjects that are planned in the first year of the award:

- (1) A signed (by the study principal investigator) copy of each applicable final IRB-approved protocol;
- (2) A signed and dated approval letter from the cognizant IRB(s) that includes the name of the institution housing each applicable IRB, provides the start and end dates for the approval of the research activities, and any IRB-required interim reporting or continuing review requirements;
- (3) A copy of any IRB-required application information, such as documentation of approval of special clearances (i.e., biohazard, HIPAA, etc.) conflict-of-interest letters, or special training requirements;
- (4) A brief description of what portions of the IRB submitted protocol are specifically included in the applicant's proposal submitted to NIST, if the protocol includes tasks not applicable to the proposal, or if the protocol is supported by multiple funding sources. For protocols with multiple funding sources, NIST will not approve the study without a non duplication-of-funding letter indicating that no other federal funds will be used to support the tasks proposed under the proposed research or ongoing project;

- (5) If a new protocol will only be submitted to an IRB if an award from NIST issued, a draft of the proposed protocol may be requested.
- (6) Any additional clarifying documentation that NIST may request during review of proposals to perform the NIST administrative review of research involving human subjects.

**f. Research Projects Involving Live Vertebrate Animals.** Any application that includes participation in research involving live vertebrate animals, that are being cared for, euthanized, or used by the project participants to accomplish research goals, teaching, or testing, must be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals," which can be obtained from National Academy Press, 500 5<sup>th</sup> Street, N.W., Department 285, Washington, DC 20055. In addition, such applications must meet the requirements of the Animal Welfare Act (7 U.S.C. § 2131 et seq.), 9 C.F.R. Parts 1, 2, and 3, and if appropriate, 21 C.F.R. Part 58. These regulations do not apply to proposed research using **preexisting** images of animals or to research plans that do not include live animals. These regulations also do not apply to obtaining animal materials from commercial processors of animal products or to animal cell lines or tissues from tissue banks. ***The applicant should clearly indicate in the proposal, by separable task, all research activities believed to include research involving live vertebrate animals and the institution(s) where the research activities involving live vertebrate animals may be conducted.***

NIST reserves the right to make an independent determination of whether your research involves live vertebrate animals. If NIST determines that your research project involves live vertebrate animals, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving live vertebrate animals subjects shall be initiated or costs incurred under the award until the NIST Grants Officer issues written approval.

If the applicant's proposal appears to include research activities involving live vertebrate animals the following information may be requested during the proposal review process:

- (1) The name(s) of the institution(s) where the animal research will be conducted;
- (2) The assurance type and number, as applicable, for the cognizant IACUC where the research activity is located. [For example: Animal Welfare Assurance from the Office of Laboratory Animal Welfare (OLAW) should be indicated by the OLAW assurance number, i.e. A-1234; an USDA Animal Welfare Act certification should be indicated by the certification number i.e. 12-R-3456; and an Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) should be indicated by AAALAC.]
- (3) The IACUC approval date (if currently approved);
- (4) If the review by the cognizant Institutional Animal Care and Use Committee (IACUC) is pending, the estimated start date for research involving vertebrate animals;
- (5) If any assurances or IACUCs need to be obtained or established, that should be clearly stated.

Additional documentation will be requested, as warranted, during review of the proposal, but may include the following for research activities involving live vertebrate animals that are planned in the first year of the award:

- (1) A signed (by the Principal Investigator) copy of the IACUC approved Animal Study Proposal (ASP);
- (2) Documentation of the IACUC approval indicating the approval and expiration dates of the ASP; and
- (3) If applicable, a nonduplication-of-funding letter if the ASP is funded from several sources.
- (4) If a new ASP will only be submitted to an IACUC if an award from NIST issued, a draft of the proposed ASP may be requested.
- (5) Any additional clarifying documentation that NIST may request during review of proposals to perform the NIST administrative review of research involving live vertebrate animals.

- g. Funding Availability and Limitation of Liability.** Funding for the program listed in this FFO is contingent upon the availability of appropriations. In no event will NIST or DoC be responsible for proposal preparation costs if these programs fail to receive funding or are cancelled because of agency priorities. Publication of this FFO does not oblige NIST or DoC to award any specific project or to obligate any available funds.
- h. Collaborations Making Use of Federal Facilities.** All proposals should include a description of any work proposed to be performed using Federal facilities.

If an applicant proposes use of NIST facilities, the statement of work should include a statement of this intention and a description of the facilities. Any use of NIST facilities must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the availability of the facilities and approval of the proposed usage. Any unapproved facility use will be stricken from the proposal prior to the merit review. Examples of some facilities that may be available for collaborations are listed on the NIST Technology Services Web site, <http://www.nist.gov/user-facilities.cfm>.

### 3. Reporting

- a. Reporting Requirements.** In lieu of the reporting requirements described in Sections A.01 Financial Reports and B.01 Performance (Technical) Reports of the DoC Financial Assistance Standard Terms and Conditions dated March 2008 (<http://www.osec.doc.gov/oam/archive/docs/GRANTS/DOC%20STCsMAR08Rev.pdf>), the following reporting requirements shall apply:
- (1) Financial Reports.** Each award applicant will be required to submit an SF-425, Federal Financial Report in triplicate (an original and two (2) copies), on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period.
- (2) Performance (Technical) Reports.** Each award applicant will be required to submit a progress report in triplicate (an original and two (2) copies), on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period. A final technical progress report shall be submitted within 90 days after the expiration date of the award. Two (2) copies of the technical progress report shall be submitted to the Project Manager and the original report to the NIST Grants Officer. Technical progress reports shall contain information as prescribed in 15 C.F.R. § 14.51.
- (3) Patent and Property Reports.** From time to time, and in accordance with the Uniform Administrative Requirements and other terms and conditions governing the award, the applicant may need to submit property and patent reports.
- b. OMB Circular A-133 Audit Requirements.** Single or program-specific audits shall be performed in accordance with the requirements contained in OMB Circular A-133, *"Audits of States, Local Governments, and Non-Profit Organizations,"* and the related *Compliance Supplement*. OMB Circular A-133 requires any non-Federal entity (*i.e.*, including non-profit institutions of higher education and other non-profit organizations) that expends Federal awards of \$500,000 or more in the applicant's fiscal year to conduct a single or program-specific audit in accordance with the requirements set out in the Circular. Applicants are reminded that NIST, the DoC Office of Inspector General or another authorized Federal agency may conduct an audit of an award at any time.
- c. Federal Funding Accountability and Transparency Act of 2006.** In accordance with 2 C.F.R. Part 170, all recipients of a Federal award made on or after October 1, 2010, are required to comply with reporting requirements under the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. No. 109-282). In general, all recipients are responsible for reporting sub-awards of \$25,000 or more. In addition, recipients that meet certain criteria are responsible for reporting executive

compensation. Applicants must ensure they have the necessary processes and systems in place to comply with the reporting requirements should they receive funding. Also see the *Federal Register* notice published September 14, 2010, at 75 FR 55663.

## VII. Agency Contact(s)

Questions should be directed to the following contact persons:

| Subject Area                                     | Point of Contact  |
|--|---|
| Programmatic and technical questions:            | Paul Boynton<br>Phone: 301-975-3014<br>E-mail: <a href="mailto:boynton@nist.gov">boynton@nist.gov</a><br><br>or<br><br>Karen Perry<br>Phone: 301-975-5910<br>E-mail: <a href="mailto:karen.perry@nist.gov">karen.perry@nist.gov</a>   |
| Technical Assistance with Grants.gov submissions | Christopher Hunton<br>Phone: 301-975-5718<br>Fax: 301-840-5976<br>E-mail: <a href="mailto:christopher.hunton@nist.gov">christopher.hunton@nist.gov</a><br><br>or<br><br>Grants.gov<br>Phone: 800-518-4726<br>E-mail: <a href="mailto:support@grants.gov">support@grants.gov</a> |
| Grant rules and regulations                      | Scott McNichol<br>Phone: 301-975-5603<br>Fax: 301-840-5976<br>E-mail: <a href="mailto:scott.mcnichol@nist.gov">scott.mcnichol@nist.gov</a>  |